

N^o 28,813



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Complete Specification Left, 30th Oct., 1905—Accepted, 30th Nov., 1905

PROVISIONAL SPECIFICATION.

“Improvements in, and relating to, Disinfecting and Deodorizing Apparatus”.

I, ARTHUR ELTON KING, of 5 St. Helen's Place, Bishopsgate, in the City of London, Office Fitter, do hereby declare the nature of this invention to be as follows:—

My invention relates to that class of disinfecting and de-odorizing apparatus
5 intended more especially for immersion in water waste preventers for flushing purposes.

Such apparatus usually consists of a vessel to contain the disinfecting material, which vessel is perforated so that some of the water on entering the flushing cistern may reach the disinfectant and some of the resultant solution may escape
10 thence into the said cistern and mingle with its contents for subsequent use when the said cistern is emptied.

An objection to such apparatus, as heretofore constructed, has been that, under any circumstances, unnecessary waste of the disinfectant has occurred and the apparatus has, therefore, had to be frequently re-charged.

15 My present invention consists essentially in providing for the disinfectant or other required substance two suitably perforated vessels one within the other there being a clearance or space between them so that a reservoir is formed between them. The said disinfectant or other substance is placed in the inner vessel and the whole apparatus is immersed or submerged in the cistern, or sus-
20 pended therein by an attached metal strip, wire or suitable device which engages with the cistern wall in the usual or any convenient manner. The water flows into the said reservoir and thence gradually reaches the disinfectant or other substance in the inner vessel. Thereupon a strong solution is formed in such inner vessel and in a short time the said reservoir will contain a weaker
25 solution, some of which, in turn, will reach the water in the cistern. Upon the cistern being emptied, and until it has become re-charged, a small quantity of the weaker solution in the reservoir will flow into it, and thereafter until the next discharge occurs some of the weaker solution will continue to reach the water in the cistern.

30 Disinfectant or other material either in the form of soluble crystals, a lump, or powder, or liquid may be employed and if preferred I may for the purpose of making the action of the apparatus more gradual, either line or fill the inner vessel with a fibrous or textile absorbent material. When a liquid is employed the inner vessel may be filled with such materials as wood-wool or
35 soft-wood saw-dust which is saturated with the disinfectant; when disinfectants of the other forms are used the said lining may be of such material as blotting paper.

Dated this 29th day of December 1904.

A. F. SPOONER,
323 High Holborn, London.
Agent for the Applicant.

Improvements in, and relating to, Disinfecting and Deodorizing Apparatus.

COMPLETE SPECIFICATION.

“Improvements in, and relating to, Disinfecting and Deodorizing Apparatus”.

I, ARTHUR ELTON KING, of 5, St. Helen's Place, Bishopsgate, in the City of London, Office Fitter, do hereby declare the nature of this invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, and accompanying drawing, that is to say:—

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My invention relates to that class of disinfecting and deodorizing apparatus intended more especially for immersion in water waste preventers, for flushing purposes, in water closets and the like.

Such apparatus usually consists of a vessel to contain the disinfecting material, which vessel is perforated so that some of the water on entering the flushing cistern may reach the disinfectant and some of the resultant solution may escape thence into the said cistern and mingle with its contents for subsequent use when the said cistern is emptied. 10

An objection to such apparatus, as heretofore constructed, has been that, under any circumstances, unnecessary waste of the disinfectant has occurred and the apparatus has, therefore, had to be frequently re-charged. 15

My present invention consists essentially in providing for the disinfectant or other required substance two suitably perforated vessels one within the other there being a clearance or space between them so that a reservoir is formed between them, the outer one having preferably a row of holes round it at or near the middle of its height, whilst the inner one has some similar small holes round it preferably close to the bottom. The said disinfectant or other substance is placed in the inner vessel and the whole apparatus is immersed or submerged in the cistern, or suspended therein by an attached metal strip, wire or suitable device which engages with the cistern wall in the usual or any convenient manner. The water flows into the said outer reservoir through the row of holes at its centre and thence gradually reaches the disinfectant or other substance in the inner vessel through the holes in the bottom of the latter. Thereupon a strong solution is formed in such inner vessel and in a short time the outer reservoir will contain a weaker solution, some of which, in turn, will reach the water in the cistern. Upon the cistern being emptied, and until it has become re-charged, a small quantity of the weaker solution in the reservoir will flow into it, and thereafter until the next discharge occurs some of the weaker solution will continue to reach the water in the cistern. Both the outer and inner vessels are closed at their ends, the cover of the outer one having a small hole to allow the passage of air. 20 25 30 35

Disinfectant or other material either in the form of soluble crystals, a lump, or powder, or liquid may be employed, and if preferred I may for the purpose of making the action of the apparatus more gradual, either line or fill the inner vessel with a fibrous or textile absorbent material. When a liquid is employed the inner vessel may be filled with such materials as wood-wool or soft-wood saw-dust which is saturated with the disinfectant; when disinfectants of the other forms are used the said lining may be of such material as blotting paper. 40

The accompanying drawing is in illustration of my invention. 45

Figure 1 is a longitudinal vertical section through a cistern.

Figure 2 is a vertical elevation on a larger scale, of the vessel suspended in the cistern, and

Improvements in, and relating to, Disinfecting and Deodorizing Apparatus.

Figure 3 a similar section through the vessel, and through the inner one containing the disinfectant.

a is the cistern having a cover and provided in the usual way with an admission valve *b* regulated by a ball and lever *c*. The water supply pipe is shewn at *d*, and *e* is the discharge pipe. *f* is the outer reservoir having a removable cover *f*¹ shewn suspended from the top of the cistern by the fastening *g*, and having a row of small perforations round it at *h*. The inner vessel *i*, has a movable cap *j* by which it can be filled with the suitable disinfectant, and the vessel has some small holes round it at *k*. An inner hole is shewn at *l* in the cover *f*¹. When the cistern is filled with water some of the latter flows into the reservoir *f* through the holes *k* and thence gradually reaches the disinfectant in the inner vessel *i* through the holes *k* forming a solution which gradually mixes with the water in *f* and thence—through the holes *h*—with the water in the cistern.

The apparatus is entirely automatic in its action, simple, cheap, and effective, and the disinfecting material is easily renewed when necessary.

The details of construction may be varied more or less as may be found advisable.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

In disinfecting and deodorizing apparatus the combination with a water cistern *a*, having a supply regulated by a ball cock, of a vessel *f* contained in the cistern and having perforations *k*, and having a removable cover *f*¹ with a perforation *l*, an inner vessel *i*, containing disinfecting and deodorizing material, a movable cover *j*, and perforations *k*, all substantially as and for the purpose described and illustrated.

Dated this 29th day of October, 1905.

30

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Fig. 1

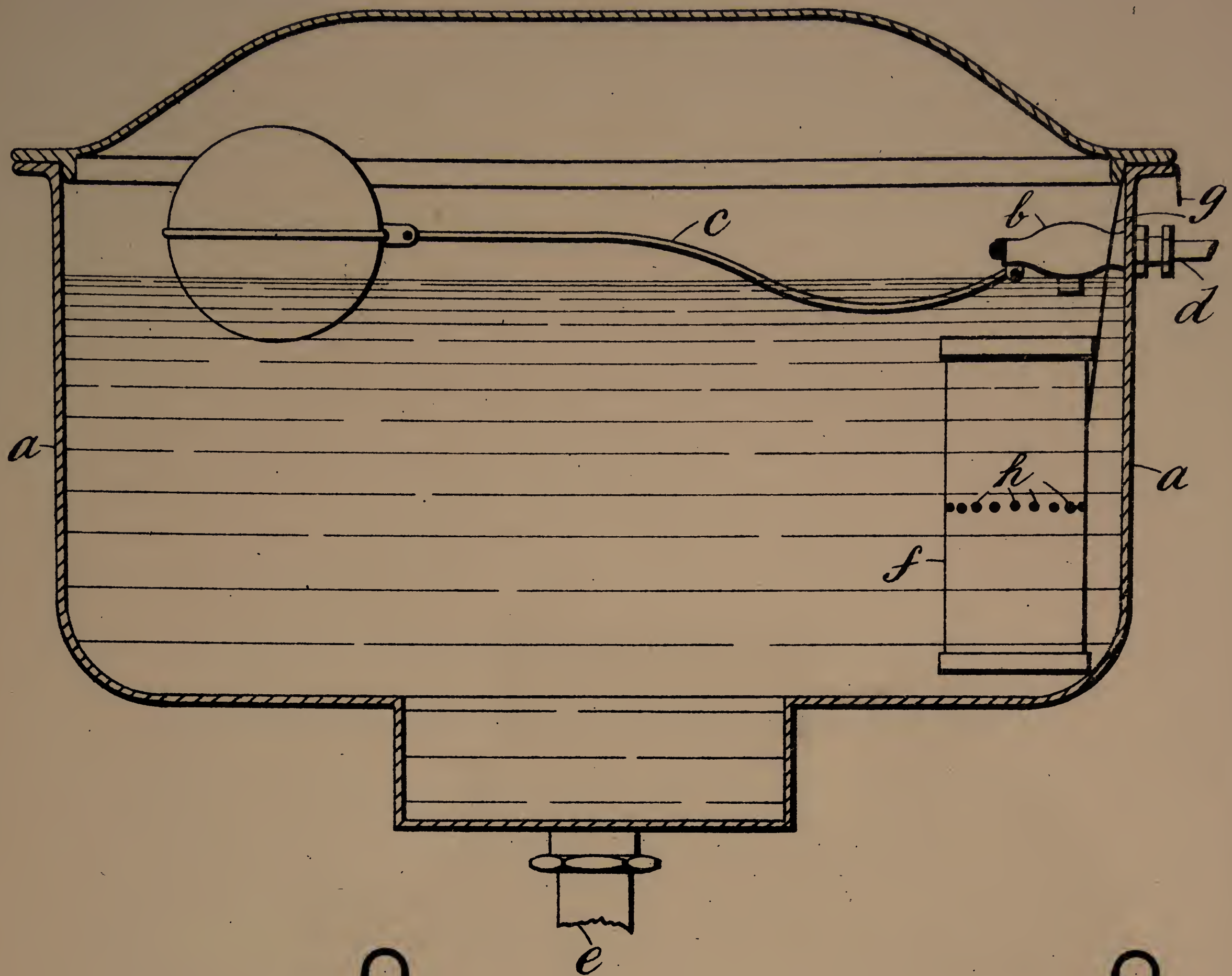


Fig. 2

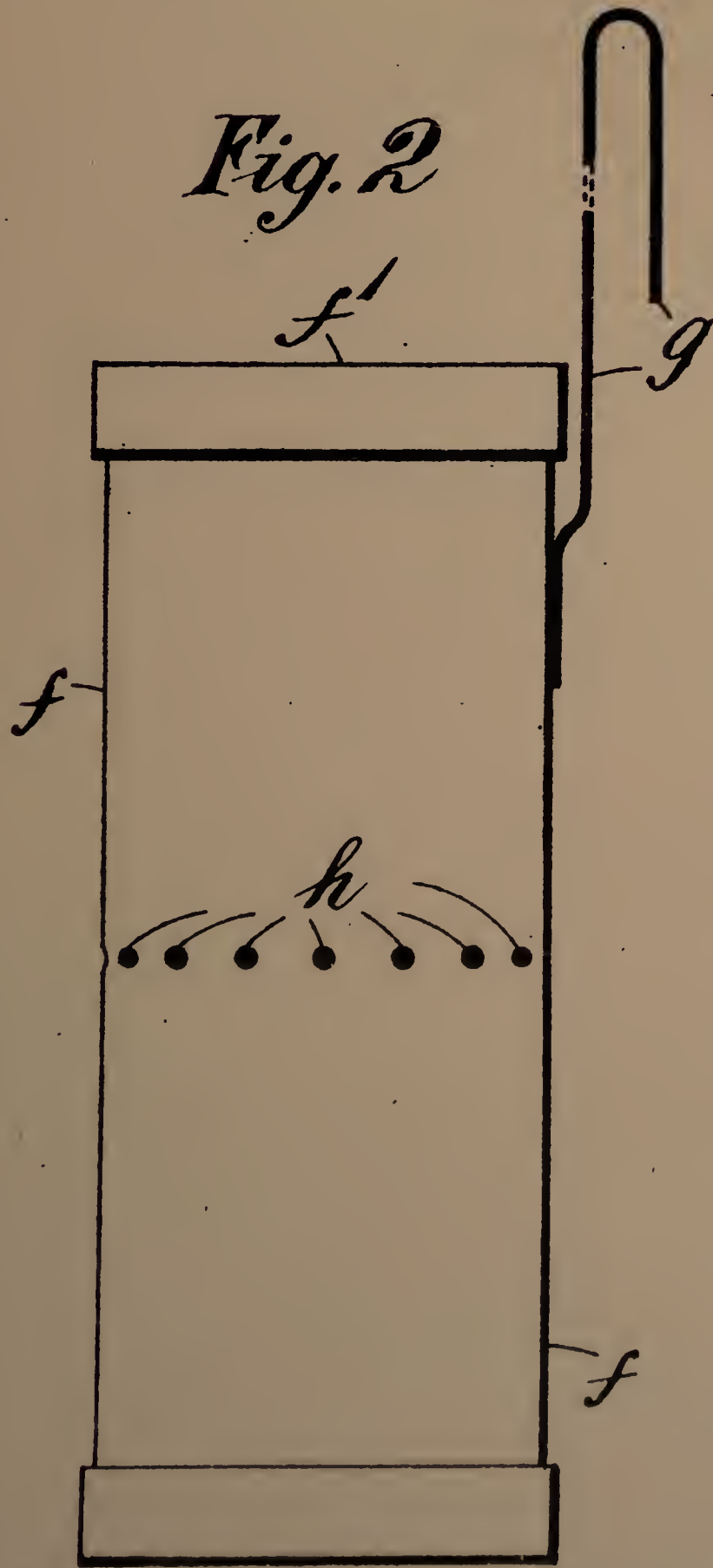
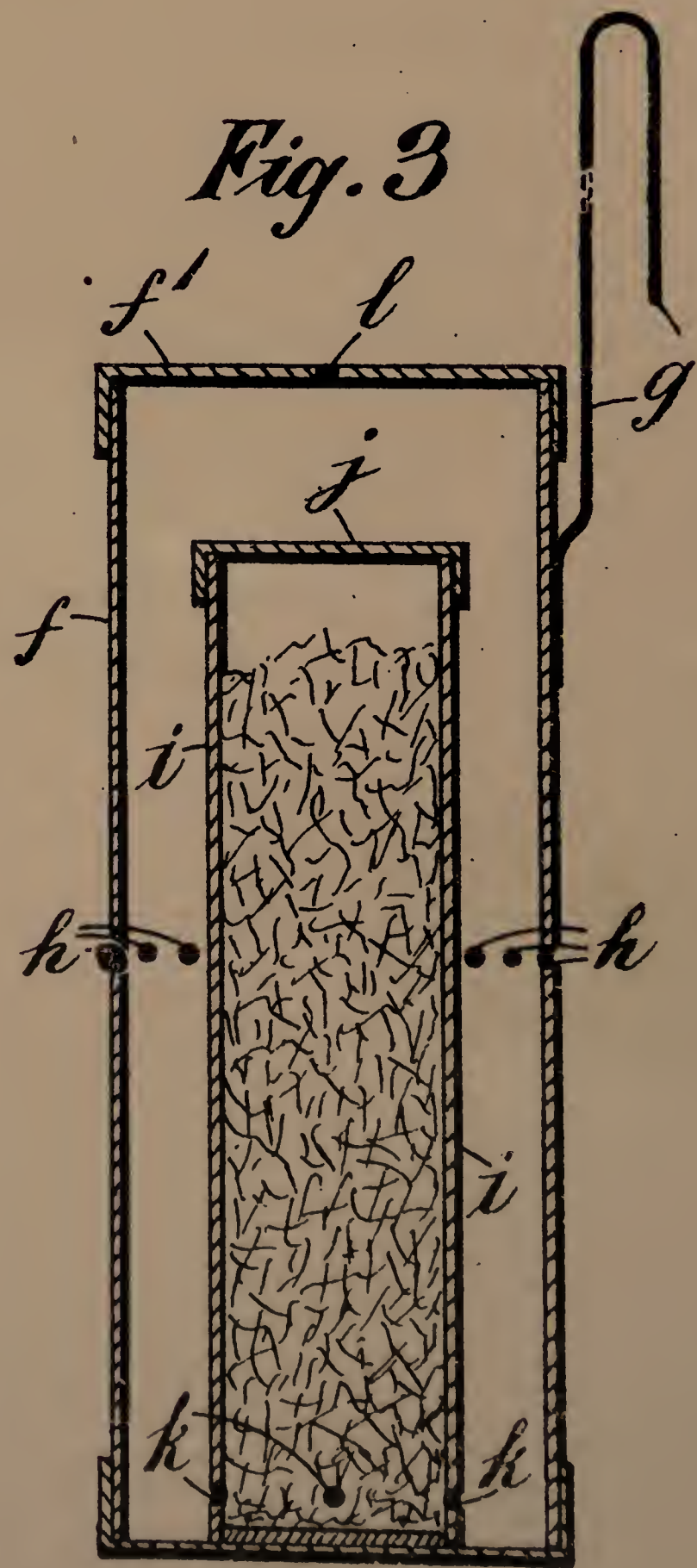


Fig. 3



[This Drawing is a reproduction of the Original on a reduced scale.]

